99. FOODS AND BEVERAGES

1874

426-19

Bakers' Trade — Heliotype Cotton Seed.

Whole grain bread

RECORDED

90

A.D. 1874, 26*th* SEPTEMBER. N° 3309.

Making Bread Direct from Grain.

No milling (quite)

LETTERS PATENT to Alexandre Sézille, of Levallois-Perret, in the Department of Seine, in the Republic of France, for the Invention of "IMPROVEMENTS IN BREAD-MAKING FROM BREAD STUFFS WITHOUT REDUCING THEM TO FLOUR BY CHEMICAL DECORTICATION."

Sealed the 26th February 1875, and dated the 26th September 1874.

PROVISIONAL SPECIFICATION left by the said Alexandre Sézille at the Office of the Commissioners of Patents, with his Petition, on the 26th September 1874.

I, ALEXANDRE SÉZILLE, of Levallois-Perret, in the Department of Seine, in the Republic of France, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN BREAD-MAKING FROM BREAD STUFFS WITHOUT REDUCING THEM TO FLOUR BY CHEMICAL DECORTICATION," to be as follows:—

Not?

The process is as follows:—A certain quantity of corn is placed in a recipient with a paddle agitator, it is impregnated with sulphuric acid at 66 degrees in the proportion of 8 to 10 per cent. of the weight of corn,

so that the epidermis or cortical envelope only is moistened, it is allowed to remain 10 to 15 minutes until the epidermis becomes black, charcoaly, fat, and viscous, a certain quantity of water is then poured on it and by means of the paddle agitator it is briskly stirred about, for some minutes the friction of the grains against one another suffices to entirely detach the epidermis and the grain appears quite white. It is decanted and the water is frequently renewed so that no trace of sulphuric acid is left, which however is not injurious to the food, as in baking the bread the slight traces of the acid which may remain escape in the form of gas by the high temperature. The sulphuric acid, whilst at the same time separating the epidermis of the grain, dissolves the fatty and colouring matters which are found immediately beneath the epidermis, and which are obstacles to perfect fermentation. Other acids or caustic alkalies may be used with the same effect, or a combination of them, and the operation may be conducted either hot or cold.

When the grain is freed from its covering and bleached, it is allowed to steep 1½ to 2 hours in soft water at 18 to 20 degrees centigrade, when it absorbs sufficient water to be then converted in a consistent paste by passing it between iron or granite cylinders, nothing then remains but to add the yeast requisite for fermentation, the succeeding operations up to the baking are unaltered. By this process a large proportion of the most nutritive and fine flavoured substances lost with the bran by the reduction of the grain to flour is preserved and utilized.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Alexandre Sézille in the Great Seal Patent Office on the 25th March 1875.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ALEXANDRE SÉZILLE, of Levallois-Perret, in the Department of Seine, in the Republic of France, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-sixth day of September, in the year of our Lord One thousand eight hundred and seventy-four, in the thirty-seventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Alexandre Sézille, Her special

licence that I, the said Alexandre Sézille, my executors, administrators, and assigns, or such others as I, the said Alexandre Sézille, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN BREAD-MAKING FROM BREAD STUFFS WITHOUT REDUCING THEM TO FLOUR BY CHEMICAL DECORTICATION," upon the condition (amongst others) that I, the said Alexandre Sézille, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Alexandre Sézille, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

In the conversion of grain into flour for bread-making a large proportion of the most nutritive and fine flavoured substances are lost with the bran, but by the system of bread-making and chemical decortication here explained, these matters which were formerly used only as food for animals, and were but of little value are now preserved and utilized.

Instead of from 20 to 22 per cent. of bran which is extracted for making second or partly white bread, the same result is attained with the loss of only 5 per cent. of the weight of corn, and an increase in the yield of bread of from 25 to 30 per cent.

The process is as follows:—A certain quantity of corn is placed in a recipient supplied with a paddle agitator; it is impregnated with sulphuric acid at 66 degrees in the proportion of 8 to 10 per cent. of the weight of corn, so that the epidermis or cortical envelope only is moistened; it is allowed to remain 10 to 15 minutes until the epidermis becomes black, charcoaly, fat, and viscous, a certain quantity of water is then poured on it, and by means of the paddle agitator it is briskly stirred about for some minutes, the friction of the grains against one another suffices to entirely detach the epidermis, and the grain appears

quite white. It is decanted and the water is frequently renewed so that no trace of sulphuric acid is left, which however is not injurious to the food, as in taking the bread the slight traces of the acid which may remain escape in the form of gas by the high temperature. The sulphuric acid, whilst at the same time separating the epidermis of the grain, dissolves the fatty and colouring matters which are found immediately beneath the epidermis, and which are obstacles to perfect fermentation. Other acid or caustic alkalies may be used with the same effect, or a combination of them, and the operation may be conducted either hot or cold.

When the grain is freed from its covering and bleached, it is allowed to steep for one hour and a half or 2 hours in soft water at 18 to 20 degrees centigrade, when it absorbs sufficient water to be then converted into a consistent paste by passing it between iron or granite rollers, nothing then remains but to add the yeast required for fermenting it, the succeeding operations up to the baking are unaltered.

I claim the process herein described of making bread direct [illegible]ereals by chemical decortication, as well as the applications [illegible]sulting therefrom, viz. :—

1. The direct use in breweries of grain barked and stripped of the fatty matters, which can be saccharified with a small quantity of malt.

2. The economical use of my paste in starch works instead of using meal to extract the starch from.

3. The manufacture of my paste for biscuits for long voyages as well as for pastry, gingerbread, and so forth.

In witness whereof, I, the said Alexandre Sézille, have hereunto set my hand and seal, this Twenty-second day of March, in the year of our Lord One thousand eight hundred and seventy-five.

ALEXANDRE SÉZILLE. (L.S.)

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